

# EC220E

VOLVO EXCAVATORS 20.6-25.1 t / 45,350 - 55,360 lb 173 hp



# A passion for performance.

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for customers around the globe. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

#### Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

#### Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.





#### You learn a lot in 180 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

#### We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

#### We have a passion for performance.

#### A strong, dedicated, capable dealer network.

Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation.

The strength of our dealer network is enhanced with extensive individualized product and product support training at our state-of-the-art Technical Training Center in Asheville and through hands-on training. At our nearby 80-acre Product Demonstration Center, visitors operate equipment from our entire product line under a variety of simulated working conditions. Both facilities are in year-round use by our dealers and customers – more than 2,000 visit each year. **Building the best starts right here**.

The products designed and manufactured by Volvo Construction Equipment have their beginnings at the most advanced Research & Design centers in the industry. Volvo CE machines are designed in 11 R&D centers and produced in 15 manufacturing facilities across the world.

The major R&D center and manufacturing plant in the Americas is located in Shippensburg, Pennsylvania. This facility has been in operation for over 30 years and – with its recently added 200,000 sq. ft. expansion – now covers 570,000 sq. ft. on an 80 acre campus. Dedicated work teams and highly advanced technologies and techniques using the Volvo Production System ensure continuous quality improvements, labor savings and cost control to reach the high quality that our customers have come to expect from Volvo.

























Renault Trucks

Mack Trucks

UD Trucks









Volvo Buses

Volvo Construction Equipment

Volvo Financial Services

# Best in Class Efficiency.

The EC220E builds on its efficiency reputation from the D-Series by ensuring all components work together and complement each other. The enhancements deliver the best in class fuel efficiency while not compromising on power - reducing emissions and consumption, while increasing productivity.

#### Volvo engine

Featuring proven advanced technology, and built on decades of experience, Volvo's robust D6 Tier 4 Final engine boasts more power - while reducing both fuel consumption and emissions to deliver superior quality, reliability and durability.





#### Boom float function

Auto engine shutdown (Optional)

With the boom float function, the pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

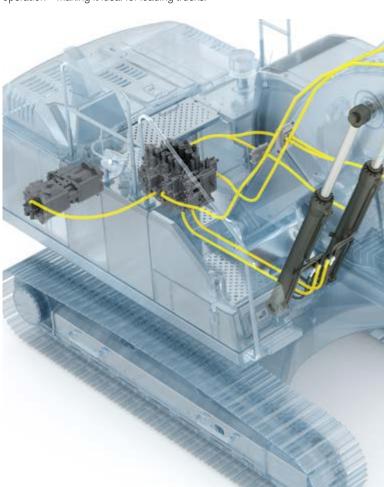


The increased pump input power creates a highly responsive operation resulting in greater productivity and faster cycle time.

To reduce fuel consumption, the engine will automatically switch off when the machine is inactive for a pre-set amount of time (five minutes is the default setting).

#### The valve is compatible with software in the machine to aid controllability, by providing smooth and easy operation. In addition to increased swing force, the EC220E also comes with a boom swing priority valve; this enhances controllability of the swing and boom operation - making it ideal for loading trucks.

Main Control Valve and Software







## First Choice for Comfort.

The cab design puts the operator in the drivers' seat to control personal specifications - from climate control, to short-cut functions on the joystick. The spacious cab allows the operator to move comfortably, to create a working environment that naturally promotes increased productivity.

#### Side view camera

As well as the rear view camera, there is now a side view camera option to cover the visual blind spot. Both views are displayed on the colour monitor, creating a safer working environment, protecting the operator and personnel on the ground.



# Table Control of the state of t

#### Bluetooth®

To aid operator convenience and support better productivity, you can now connect a Bluetooth device to the machine enabling the handsfree function.

#### Short-cut key

For added convenience, functions such as windshield wipers, cameras, or audio mute function can all be assigned a short-cut button on the joystick. This allows the operator to select a function during the application without disruption.





#### Seat belt warning alarm

If the seat belt is not buckled when the ignition key is turned, an alarm is triggered with a continuous visual alert. This emphasizes our priority for operator safety.

# Building on Foundations of Trust and Quality.

Quality is one of Volvo's core values and it goes hand-in-hand with reliability and durability. The EC220E pays particular attention to having all the components working at a high level of capacity but also being built to stand the test of time – providing the customer and operator with peace of mind.

#### **ROPS**

The cab features ROPS – this reinforced steel structure ensures the operator is protected in the unlikely event of the machine rolling over, while it also meets the ISO standards for safety.



#### Lower frame

The intelligently designed X-shape lower frame enables even weight distribution increasing stability and durability - preventing damage from rock and debris.

#### **Boom and Arm**

The robust design includes internal plates positioned to support pressure points during the range of applications. This helps disperse the stress from high-pressure areas of the boom and arm, to ensure maximum productivity time after time, during the most demanding applications.





#### Heavy-duty Undercarriage

The EC220E heavy-duty undercarriage creates excellent tractive force for improved durability and reliability in demanding terrain. A robust undercarriage increases the service life of the machine.





## **Customer Choice.**

Creating a machine that can adapt to a number of attachments increases productivity and reduces cycle time. The EC220E not only manages to achieve this versatility but it is a machine that incorporates the same high quality performance across its entire menu of applications – meaning the operator is safe in the knowledge that with Volvo there is no better option.

#### **Attachment Management System**

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab, which ensures the use of various attachments for increased versatility.

# NEW XI WORK TOOL Flow 1701 Control Push Pedal control

#### Extra piping

An additional piping solution is available on the breaker and shear piping (X1), accommodating the use of tilt/rotator attachments.





#### Pedal

The pedal for the breaker and shear piping (X1) control is electric to offer precise control to allow the operator to use a wide variety of attachments.



#### Response mode

The attachment response sensitivity can be adjusted using the keypad. This allows the operator to tailor machine response for maximum impact in different environments.

# Proactive Maintenance Solutions.

Maintaining your machine will ensure you get the maximum lifetime and productivity. This is why Volvo have made this process easy – developing it to be fast, regular and safe.

#### Full size guard rails

Multiple sturdy handrails provide safe and easy access to the superstructure for inspection and maintenance.



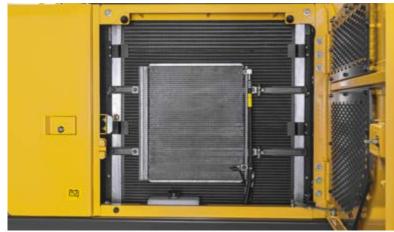
# SERVICE Engine outsites 248 h Fuel MatriNater sep 498 h Hydraulic oil

#### Service interval alerts

Real-time service alerts are displayed on the color monitor to enable diagnostic checks. Separate service intervals include – the engine oil/filter, fuel filter/water separator, hydraulic oil and hydraulic oil filter. This ensures peace of mind and maximum uptime.

#### Single layer cooling system

The radiator, charged air cooler and hydraulic oil cooler are situated side-by-side on a single layer, to maximize efficiency, reduce blockages and aid cleaning. The system is easily accessed from ground level by simply opening the side door.





#### Anti-slip steel plates

Well-positioned punched anti-slip plates provide superior grip and durability. The design facilitates easy cleaning while promoting safety.





# Mix and match for a superior fit.

Maximize your productivity and profitability with Volvo's EC220E crawler excavator and a range of durable attachments. Increase your versatility, access more applications and perform a variety of tasks – all while experiencing faster cycle times and excellent control.

#### Buckets - GP/HD/XD

Volvo's buckets are the perfect tool for digging and re-handling including all conditions from soft, medium and hard materials. Heavy-duty buckets are intended for productive digging in compact materials. All provide maximum productivity and long life and feature original Volvo wear components.

#### **Breakers**

The HB-Series of hydraulic breakers are optimized to the specific weights of Volvo machines and tailored to Volvo quick couplers for swift, safe and simple attachment changes. They are available with a full assortment of tools.





#### S-type Coupler

The Volvo S-type quick coupler is designed to work with Volvo attachments - delivering ultimate compatibility and unrivalled performance.





#### **Universal Quick Coupler**

The Volvo universal quick coupler offer maximum versatility. It picks up a variety of attachments from various manufacturers and meets new safety regulations.

#### Genuine Volvo wear parts

Volvo offers a selection of economic, replaceable wear parts including high quality teeth, segments, side cutters, adapters and shrouds to protect the bucket and ensure long life.

Improved total cost of

ownership.

#### Boom and arm

To achieve the best performance, select the most suitable boom and arm configuration combination for your requirements.

#### Ultimate tool carrier

Designed to not only be compatible with a range of attachments, but also to enhance their performance by easily and quickly switching to accommodate any needs.

#### Optimized hydraulics

Designed to perfectly match the engine power, reduce power loss, and improve controllability and response time.

#### Diesel Exhaust Fluid (DEF)

Volvo offers a total DEF solution that is quality assured, cost efficient and easily accessible. Contact your Volvo dealer for more information.

#### Boom float

The pump power for boom lowering can be saved or used for other functions, reducing the cycle time. Also, the grading operation can be made easier.

#### Attachment management system

The password protected management system allows storage for up to 20 different attachments. It pre-sets and permits hydraulic flow and pressure to be adjusted within the cab.



#### Full size guard rails

Multiple sturdy guard rails provide safe and easy access to the super-structure for inspection and maintenance.

#### Side view camera

Covers the visual blind spot at the side of machine. View is displayed on the color monitor, creating a safer working environment, protecting the operator and personnel on the ground.

VOLVO

#### HMI

All machine interfaces are ergonomically positioned and

designed for optimum control and efficiency.

#### Bluetooth®

Bluetooth and hands-free functions have been added, allowing the operator to connect to wireless functions for increased comfort and safety.

#### Short cut key function

For ease of use, functions such as windshield wipers, cameras, or audio mute can all be assigned a short-cut button on the joystick

#### Volvo engine

Volvo's efficient D6 Tier 4 Final engine gives you more power while consuming less fuel for low emission levels.

All detail – no matter how small - is overlooked. Silicone caulking is used to prevent rust, waterproof harnesses and connections have been installed - as well as heavy-duty door hinges

and bolted-on protection for the framework lights.

**Built to last** 

K

#### **Grouped filters**

Filters are well grouped and easily accessible from the ground level.

This facilitates the speed and ease of servicing.

# Adding value to your business.

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to the positive return of your investment.





#### **Complete Solutions**

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of

your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.





Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.



#### Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.



### Volvo EC220E in detail.

#### Engine

The latest generation, Volvo engine Tier 4f / Stage IV emissions compliant diesel engine fully meets the demands of the latest, emissions regulations. Featuring Volvo Advanced Combustion Technology (V-ACT), it is designed to deliver superior performance and fuel efficiency. The engine uses precise, high pressure fuel injectors, turbo charger and air-to-air intercooler, and electronic engine controls to optimize machine performance.

Air Filter: 3-stage with pre-cleaner

Automatic Idling System: Reduces engine speed to idle when the levers and pedals are not activated resulting in less fuel consumption and low cab noise levels.

Engine		Volvo		D6J			
Max power at	r/s	s / r/min	30 / 1 800				
Net, ISO 9249/SAE J1349		kW / hp	128 / 172				
Gross, ISO 14396/SAE J1995		kW / hp	129 / 173				
Max torque at	Nm / r/min	lbf ft / r/min	849 / 1 350	626 / 1,350			
No. of cylinders				6			
Displacement	1	cu.in	5.7	348			
Bore	m	in	98	3.86			
Stroke	m	in	126	4.96			

#### **Electrical system**

Well protected high-capacity electrical system. Waterproof double-lock harness plugs are used to secure corrosion-free connections. The main relays and solenoid valves are shielded to prevent

damage. The master switch is standard. Contronics provides advanced monitoring of machine functions and important

diagnostic information.		
Voltage	V	24
Batteries	V / Ah	2 x 12 / 140
Alternator	V / Ah	28 / 80

#### Start motor Swing system

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and antirebound valve are standard Max. slew speed r/min 11.1

Max. slew torque kNm lbf ft 83 61,220

Drive

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Max. drawbar pull	kN	lbf	183	41,150
Max. travel speed	km/h	mph	3.5 / 5.7	2.2 / 3.5
Gradeability		۰		35

#### Undercarriage

Robust X-shaped frame with greased	and se	aled track	chains as st	andard
Track shoe				2 x 49
Link pitch	mm	in	190	7.5
Shoe width, triple grouser	mm	in	500 / 600 / 700 / 800 / 900	20 / 24 / 28 / 32 / 36
Shoe width, triple grouser (HD)	mm	in	600	24
Shoe width, double grouser	mm	in	700	28
Bottom rollers				2 x 8
Top rollers				2 x 2
Service refill canacities				

Service reilli capacities				
Fuel tank	- 1	gal	320	85
Hydraulic system, total	I	gal	290	77
Hydraulic tank	1	gal	140	37
DEF tank	I	gal	27	7
Engine oil	- 1	gal	25	7
Engine coolant	1	gal	35	9
Swing reduction unit	- 1	gal	6	2
Travel reduction unit	1	gal	2 x 5.8	2 x 2

#### Hydraulic system

The hydraulics system, combined with the fully electronic control system and advanced ECO mode, has been optimized to work in harmony with engine to match the engine power, reduce power loss and improve controllability and response time.

The following important functions are included in the system:

**Summation system:** Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity.

**Arm priority:** Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.

Swing priority: Gives priority to swing functions for faster simultaneous operations.

**Regeneration system:** Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.

**Power boost:** All digging and lifting forces are increased. **Holding valves:** Boom and arm holding valves prevent the digging equipment from creeping.

#### Main pump

Туре	2 x variabl	e displace	ement axial p	iston pumps
Maximum flow	l/min	gpm	2 x 207	2 x 55
Pilot pump				
Туре				Gear pump
Maximum flow	l/min	gpm	1 x 18	1 x 5
Relief valve setting				
Implement	Мра	psi	34.3 / 36.3	4,980 / 5,260
Travel circuit	Мра	psi	34.3	4,980
Slew circuit	Мра	psi	27.9	4,050
Pilot circuit	Мра	psi	3.9	570
Travel: Variable displacement axia	piston mot	or with m	echanical bra	ıke

#### Slew: Fixed displacement axial piston motor with mechanical brake Hydraulic cylinders

• • • • • • • • • • • • • • • • • • • •			
Mono boom			2
Bore x Stroke	ø x mm	ø x in 125 x 1 235	4.9 x 48.6
2 piece boom			1
Bore x Stroke	ø x mm	ø x in 160 x 1 070	6.3 x 42.1
Arm			1
Bore x Stroke	ø x mm	ø x in 135 x 1 540	5.3 x 60.6
Bucket			1
Bore x Stroke	ø x mm	øx in 120 x 1 065	4.7 x 41.9
Bucket for LR boom			1
Bore x Stroke	ø x mm	øxin 100 x 865	3.9 x 34.1

#### Cab

24 x 5.5

The operator's cab has easy access via a wide door opening. The cab is supported on hydraulic dampening mounts to reduce shock and vibration levels. These along with sound

absorbing lining provide low noise levels. The cab has excellent all-round visibility. The front windshield can easily slide up into the ceiling, and the lower front glass can be removed and stored in the side door.

**Integrated air-conditioning and heating system**: The pressurized and filtered cab air is supplied by an automatically-controlled fan. The air is distributed throughout the cab from 14 vents.

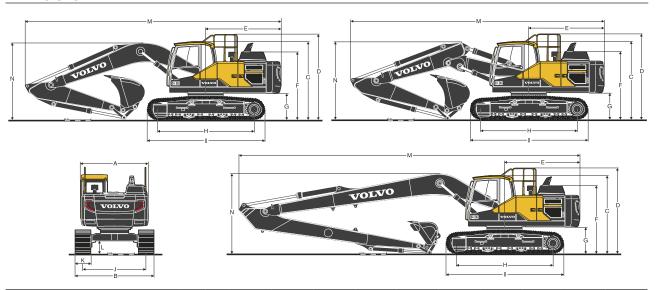
**Ergonomic operator's seat**: The adjustable seat and joystick console move independently to accommodate the operator. The seat has nine different adjustments plus a seat belt for the operator's comfort and safety.

#### Sound Level

Sound level in cab according to ISO 6	396	
LpA (standard)	dB(A)	69
LpA (tropical)	dB(A)	70
External sound level according to ISO 6	395, EU Noise Direct	tive (2000/14/EC)
LwA (standard)	dB(A)	102
LwA (tropical)	dB(A)	103

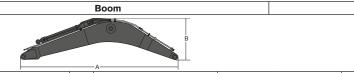
# Specifications.

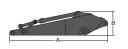
#### **DIMENSIONS**



Description	U	nit	EC220EL									OELR
Boom	m,	ft in		5.7	7 (18' 8")	mono and	5.57 (18	' 3") 2-pie	есе		8.85	29' 0"
Arm	m	ft in	2.0	6' 7"	2.5	8' 2"	2.9	9' 6"	3.5	11' 6"	6.25	20' 6"
A. Overall width of upper structure	mm	ft in	2 540	8' 4"	2 540	8' 4"	2 540	8' 4"	2 540	8' 4"	2 540	8' 4"
B. Overall width	mm	ft in	2 990	9' 10"	2 990	9' 10"	2 990	9' 10"	2 990	9' 10"	3 190	10' 6"
C. Overall height of cab	mm	ft in	2 955	9' 8"	2 955	9' 8"	2 955	9' 8"	2 955	9' 8"	2 955	9' 8"
D. Overall height of guard rail	mm	ft in	3 270	10'9"	3 270	10' 9"	3 270	10' 9"	3 270	10' 9"	3 270	10' 9"
E. Tail swing radius	mm	ft in	2 850	9' 4"	2 850	9' 4"	2 850	9' 4"	2 850	9' 4"	2 850	9' 4"
F. Overall height of engine hood	mm	ft in	2 600	8' 6"	2 600	8' 6"	2 600	8' 6"	2 600	8' 6"	2 600	8' 6"
G. Counterweight clearance *	mm	ft in	1 025	3' 4"	1 025	3' 4"	1 025	3' 4"	1 025	3' 4"	1 025	3' 4"
H. Tumbler length	mm	ft in	3 660	12' 0"	3 660	12' 0"	3 660	12' 0"	3 660	12'0"	3 660	12' 0"
I. Track length	mm	ft in	4 460	14' 8"	4 460	14' 8"	4 460	14' 8"	4 460	14' 8"	4 460	14' 8"
J. Track gauge	mm	ft in	2 390	7' 10"	2 390	7' 10"	2 390	7' 10"	2 390	7' 10"	2 390	7' 10"
K. Shoe width	mm	ft in	600	2' 0"	600	2' 0"	600	2' 0"	600	2' 0"	800	2' 7"
L. Min. ground clearance *	mm	ft in	460	1' 6"	460	1' 6"	460	1' 6"	460	1' 6"	460	1' 6"
M. Overall length	mm	ft in	9 795	32' 2"	9 745	32' 0"	9 690	31'9"	9 720	31' 11"	12 880	42' 3"
M <sup>1</sup> . Overall length	mm	ft in	9 660	31'8"	9 610	31' 6"	9 570	31'5"	9 560	31' 4"	-	-
N. Overall height of boom	mm	ft in	3 100	10' 2"	3 080	10' 1"	2 940	9' 8"	3 260	10' 8"	3 055	10' 0"
N <sup>1</sup> . Overall height of boom	mm	ft in	3 065	10' 1"	3 065	10' 1"	2 960	9' 9"	3 310	10' 10"	-	-

#### DIMENSIONS





Arm

Description	Unit	mono		mo	no	<b>2</b> -pi	iece	Long-Reach		
Boom	m	5.7	18' 8"	5.7 HD	18' 8"	5.57	18' 3"	8.85	29' 0"	
Length	mm	5 910	19' 5"	5 910	19' 5"	5 780	19' 0"	9 060	29' 9"	
Height	mm	1 585	5' 2"	1 585	5' 2"	1 570	5' 2"	1 460	4' 9"	
Width	mm	670	2' 2"	670	2' 2"	670	2' 2"	670	2' 2"	
Weight	kg	2 006	4,420	2 151	4,740	2 585	5,700	2 510	5,530	

 $<sup>\</sup>ensuremath{^{\star}}$  Includes cylinder, piping and pin, excludes boom cylinder pin

Description	Unit											Long-	Reach
Arm	m	2.0	6' 7"	2.5	8' 2"	2.9	9' 6"	2.9 HD	9' 6"	3.5	11' 6"	6.25	20' 6"
Length	mm	3 065	10' 1"	3 525	11' 7"	3 910	12' 10	3 910	12' 10	4 540	14' 11	7 330	24' 1"
Height	mm	980	3' 3"	860	2' 10"	860	2' 10"	860	2' 10"	855	2' 10"	945	3' 1"
Width	mm	440	1' 5"	440	1' 5"	440	1' 5"	440	1' 5"	440	1' 5"	385	1' 3"
Weight	kg	1 091	2,410	1 133	2,500	1 146	2,530	1 183	2,610	1 226	2,700	1 309	2,890

<sup>\*</sup> Includes cylinder, linkage and pin

## Specifications.

Description	Shoe	width	Operatin	g weight	Ground	pressure	Overal	l width	Operatin	g weight	Ground pressure		Overall width	
•	mm	ft in	kg	lb	kPa	psi	mm	ft in	kg	lb	kPa	psi	mm	ft in
				EC220EL										
			5	820 kg	/ 0.921(	n, 2.9 m ( 1,810 lb) lb) counte	bucket,	n,	5.57 m (18' 3") 2-piece, 2.9 m (9' 6") arm, 820 kg / 0.92 l (1,810 lb) bucket, 4 200 kg (9,260 lb) counterweight					•
	500	20	21 440	47,280	53.0	7.7	2 890	9' 6"	22 130	48,790	54.9	8.0	2 890	9' 6"
	600	24	21 700	47,850	45.1	6.5	2 990	9' 10"	22 385	49,360	46.1	6.7	2 990	9' 10"
Triple grouser	700	28	22 160	48,860	39.2	5.7	3 090	10' 2"	22 840	50,370	40.2	5.8	3 090	10' 2"
	800	32	22 445	49,490	35.3	5.1	3 190	10' 6"	23 130	51,000	36.3	5.3	3 190	10' 6"
	900	36	22 740	50,140	31.4	4.6	3 290	10' 10"	23 420	51,650	32.4	4.7	3 290	10' 10"
Triple grouser HD	600	24	21 870	48,220	45.1	6.5	2 990	9' 10"	22 550	49,730	47.1	6.8	2 990	9' 10"
Double grouser	700	28	22 425	49,450	40.2	5.8	3 090	10' 2"	23 110	50,960	41.2	6.0	3 090	10' 2"
Single grouser	600	24	21 910	48,310	45.1	6.5	2 990	9' 10"	22 590	49,820	47.1	6.8	2 990	9' 10"
					EC22	OELR								
			8.85 m (29' 0") boom, 6.25 m (20' 6") arm, 452 kg / 0.52 l (1,000 lb) bucket, 5 000 kg (11,030 lb) counterweight											
Triple graveer	800	32	23 690	52,250	37.3	5.4	3 190	10' 6"						
Triple grouser	900	36	23 990	52,890	33.3	4.8	3 290	10' 10"						

<b>BUCKET S</b>	ELECTION	GUID	E														
												EC2	20EL				
Bucket type		Cap	acity	Cutting width		Weight		Teeth	5	i.7 m (18'	8") Boo	m	5.57 m (18' 3") 2-piece				
									800 mm (32") shoe, 4 200 kg (9,260 lb) counterweight								
		L	yard <sup>3</sup>	mm	in	kg	lb	EA	2.0 m (6' 7")	2.5 m (8' 2")	2.9 m (9' 6")	3.5 m (11' 6")	2.0 m (6' 7")	2.5 m (8' 2")	2.9 m (9' 6")	3.5 m (11' 6")	
		480	0.63	600	23.40	666	1,468	3.00	С	С	С	С	С	С	С	С	
		590	0.77	750	29.25	711	1,568	3.00	С	С	С	С	С	С	С	С	
	General	750	0.98	900	35.10	792	1,746	4.00	С	С	С	С	С	С	С	С	
	purpose	920	1.20	1 050	40.95	862	1,900	4.00	С	С	С	С	С	С	С	С	
		1 090	1.43	1 200	46.80	951	2,096	5.00	С	С	С	С	С	С	С	С	
		1 270	1.66	1 350	52.65	1 038	2,289	5.00	С	С	С	С	С	С	С	С	
Direct fit		480	0.63	600	23.40	738	1,628	3.00	D	D	D	D	D	D	D	D	
Buckets		480	0.63	600	23.40	675	1,488	3.00	D	D	D	D	D	D	D	D	
		750	0.98	900	35.10	872	1,922	4.00	D	D	D	D	D	D	D	D	
	Heavy	750	0.98	900	35.10	808	1,783	4.00	D	D	D	D	D	D	D	D	
	duty	920	1.20	1 050	40.95	951	2,098	4.00	D	D	D	D	D	D	D	D	
		920	1.20	1 050	40.95	888	1,959	4.00	D	D	D	D	D	D	D	D	
		1 090	1.43	1 200	46.80	1 046	2,307	5.00	D	D	D	D	D	D	D	D	
		1 090	1.43	1 200	46.80	983	2,168	5.00	D	D	D	D	D	D	D	D	

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.

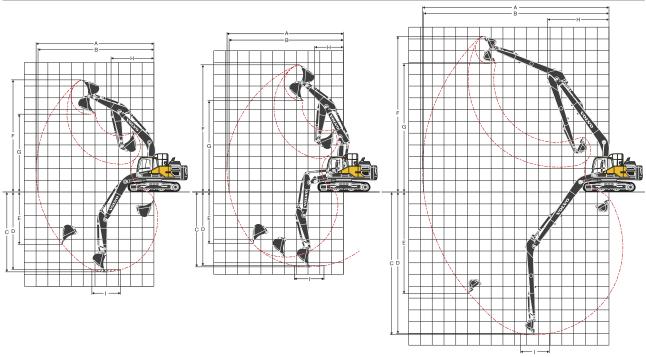
The recommendations are given as a guide only, based on typical operation conditions.

Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

#### Maximum materal density

	kg/m³	lb/yd <sup>3</sup>	
Α	1 200 - 1 300	2,000 - 2,200	Coal, Caliche, Shale
В	1 400 - 1 600	2,300 - 2,700	Wet earth and clay, Limestone, Sandstone
С	1 700 - 1 800	2,800 - 3,100	Granite, Wet sand, Well blasted rock
D	> 1 900	> 3,200	Wet mud, Iron ore

#### WORKING RANGES



																		<b>←</b> -ı	<b>→</b>			
Description	n		U	Init								EC2	20EL									OELR
Boom			-	ft in			5.	7 (18' 8	3") mc	no					5.57	7 (18' 3	3") <b>2-</b> p	iece				29' 0"
Arm			m	ft in	2.0	6'7"	2.5	8' 2"	2.9	9'6"	3.5	11'6"	2.0	6'7"	2.5	8' 2"	2.9	9'6"	3.5	11'6"	6.25	20' 6"
A. Max. dig	ging reac	h	mm	ft in	9 090	29' 10"	9 550	31' 4"	9 930	32' 7"	10 390	34' 1"	8 980	29' 6"	9 450	31'0"	9 840	32' 3"	10 310	33' 10"	15 800	51' 10"
B. Max. dig ground	gging reac	h on	mm	ft in	8 910	29' 3"	9 380	30' 9"	9 770	32' 1"	10 240	33' 7"	8 800	28' 10"	9 280	30' 5"	9 670	31'9"	10 150	33' 4"	15 700	51'6"
C. Max. digging depth		mm	ft in	5 830	19' 2"	6 330	20' 9"	6 730	22' 1"	7 330	24' 1"	5 410	17' 9"	5 900	19' 4"	6 300	20' 8"	6 850	22' 6"	12 100	39' 8"	
D. Max. dig (2.44 m	gging dep		mm	ft in	5 560	18' 3"	6 100	20' 0"	6 540	21'5"	7 130	23' 5"	5 290	17' 4"	5 790	19' 0"	6 200	20' 4"	6 750	22' 2"	12 000	39' 4"
E. Max. ver depth	tical wall	digging	mm	ft in	4 880	16' 0"	5 620	18' 5"	6 090	20' 0"	6 470	21'3"	4 390	14' 5"	4 990	16' 4"	5 410	17' 9"	5 930	19' 5"	11 290	37' 0"
F. Max. cutt	ting heigh	t	mm	ft in	8 940	29' 4"	9 220	30' 3"	9 460	31'0"	9 460	31'0"	10 010	32' 10"	10 380	34' 1"	10 710	35' 2"	10 920	35' 10"	13 300	43' 8"
G. Max. du	ımping he	ight	mm	ft in	6 190	20' 4"	6 430	21' 1"	6 650	21' 10"	6 700	22' 0"	7 100	23' 4"	7 460	24' 6"	7 780	25' 6"	8 010	26' 3"	10 950	35' 11"
H. Min. from	nt swing r	adius	mm	ft in	3 790	12' 5"	3 670	12' 0"	3 640	11'11"	3 660	12' 0"	2 890	9' 6"	2 740	9'0"	2 470	8' 1"	2 730	8' 11"	5 200	17' 1"
DIGGING	FORC	ES W	ITH	DIF	RECT	FIT B	UCK	ET														
Bucket rad	lius		mm	ft in	1 528	5' 0"	1 528	5' 0"	1 528	5' 0"	1 528	5' 0"	1 528	5' 0"	1 528	5' 0"	1528	5' 0"	1528	5'0"	1250	4' 1"
	Normal	SAE J1179	kN	lb	146	32,820	125	28,100	125	28,100	125	28,100	146	32,820	125	28,100	125	28,100	125	28,100	68	15,290
Breakout force -	Power boost	SAE J1179	kN	lb	154	34,620	132	29,670	132	29,670	132	29,670	154	34,620	132	29,670	132	29,670	132	29,670	-	-
bucket	Normal	ISO 6015	kN	lb	165	37,090	141	31,700	141	31,700	141	31,700	165	37,090	141	31,700	141	31,700	141	31,700	77	17,310
	Power boost	ISO 6015	kN	lb	174	39,120	149	33,500	149	33,500	149	33,500	174	39,120	149	33,500	149	33,500	149	33,500	-	-
	Normal	SAE J1179	kN	lb	144	32,370	117	26,300	101	22,710	92	20,680	144	32,370	117	26,300	101	22,710	92	20,680	44	9,890
Tearout force -	Power boost	SAE J1179	LNI		153	34,400	124	27,880	107	24,050	97	21,810	153	34,400	124	27,880	107	24,050	97	21,810	-	-
dipper arm	Normal	ISO 6015	kN	lb	149	33,500	121	27,200	104	23,380	94	21,130	149	33,500	121	27,200	104	23,380	94	21,130	45	10,120
	Power boost	ISO 6015	kN	lb	158	35,520	128	28,780	110	24,730	99	22,260	158	35,520	128	28,780	110	24,730	99	22,260	-	-
Rotation ar	ngle, buck	et		0	1	66	1	75	1	75	1	75	1	75	1	75	1	75	1	75	1	78

### Specifications.

#### LIFTING CAPACITY EC220EL

Lifting capacity at the arm end without bucket.

Lifting hook

related to

around Across UC Along UC Across UC Along UC Across UC Along UC Across UC Along UC level m in lb lb lb lh lb lb lb lb Boom: 5.7 m (18' 8") 7.5 25 2.5 m (8' 2") 20 \*5.5 \*12,110 \*5.5 \*12,110 Arm: 6.0 Shoe: 800 mm (32") 45 15 \*7.0 \*15.100 \*7.0 \*15.100 \*60 \*13.120 12 150 4,200 kg 3.0 10 \*9.0 \*19,400 17,660 \*6.9 \*14,990 11,640 (9,260 lb) 1.5 5 \*10.8 \*23,250 16,610 \*7.8 \*16,910 5.2 11.140 0.0 0 \*11.6 \*25,050 7.5 16,120 8.0 17,210 5.0 10,810 17,100 \*10.8 \*24.770 \*10.8 \*24.770 \*24.900 10.710 -1.5-5 \*11.5 7.5 16.050 7.9 5.0 -3.0 -10 \*32,010 14.7 31,560 \*22,840 16,280 \*7.8 \*16,730 5.0 10,890 \*114 \*114 \*17 180 -15 \*24.370 \*24.370 \*82 78 -45 16940 Boom: 5.7 m (18' 8") 25 \*5.2 \*5.2 2.9 m (9' 6") 6.0 20 \*5.1 \*11,170 \*5.1 \*11,170 Arm: Shoe: 800 mm (32" 4.5 15 \*5.7 12.330 \*5.7 12,310 CWT: 4,200 kg 3.0 10 \*8.4 \*18,180 8.3 17,980 \*6.6 \*14,300 5.5 11,780 (9,260 lb) 1.5 5 \*10.4 \*22,370 16,830 \*7.6 \*16,400 5.2 11,240 0.0 \*12,560 12,560 \*24,740 16,210 17,270 10,860 \*14,060 \*6.3 14.060 \*6.3 \*10.3 \*23,490 \*10.3 -5 \*23,490 \*25,120 16,030 7.9 17,090 5.0 10,700 -1.5\*11.6 -3.0 \*11.4 \*25,580 \*11.4 \*25,580 \*15.7 \*33,940 14.6 31,310 \*10.9 \*23,640 16,180 8.0 17,190 5.0 10,790 \*27,330 \*12.7 \*27,330 \*9.1 \*19,310 7.7 16,680 4.5 -15 \*12.7 Boom: 5.7 m (18' 8") 7.5 25 Arm: 3.5 m (11' 6") 6.0 20 Shoe: 800 mm (32" 4.5 15 \*49 \*10.720 \*4.9 \*10.720 4,200 kg \*12,590 11,980 3.0 10 \*5.8 (9.260 lb) \*14710 11380 15 5 \*68 53 0.0 0 \*7.6 \*16,460 10,900 -1.5 \*10.8 \*23,490 15.960 7.9 17.040 4.9 10.650 -5 7.4 -3.0 -10 \*15.4 \*33,360 14.4 30,840 \*10.6 \*22,860 15,980 \*7.9 17,020 4.9 10,630 -4.5 -15 \*16.7 \*38,240 \*16.7 \*38,240 \*13.1 \*28,240 \*13.1 \*28,240 \*9.3 \*20,080 7.6 16,320 \*6.9 \*14,650 10,920 Lifting hook 7.5 m (25') 9.0 m (30') Max. reach related to

3.0 m (10')

6.0 m (20')

For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

1.5 m (5')

		gro	und														
		level		Alor	ng UC	UC Acros		Alon	g UC	Acros	ss UC	Alor	ng UC	Across UC		m	ft
		m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	1111	11
Boom:	5.7 m (18' 8")	7.5	25	-	-	-	-	-	-	-	-	*5.7	*12,540	*5.7	*12,540	5.6	18.0
Arm:	2.5 m (8' 2")	6.0	20	-	-	-	-	-	-	-	-	*5.6	*12,350	4.7	10,400	6.9	22.3
Shoe:	800 mm (32")	4.5	15	*5.7	-	4.0	-	-	-	-	-	*5.7	*12,530	3.9	8,630	7.6	24.8
CWT:	4,200 kg	3.0	10	6.0	12,850	3.9	8,370	-	-	-	-	5.4	11,970	3.5	7,790	8.0	26.2
	(9,260 lb)	1.5	5	5.9	12,610	3.8	8,140	-	-	-	-	5.3	11,580	3.4	7,490	8.1	26.5
		0.0	0	5.8	12,450	3.7	7,990	-	-	-	-	5.4	11,890	3.5	7,650	7.9	25.8
		-1.5	-5	-	-	-	-	-	-	-	-	5.9	13,090	3.8	8,380	7.4	24.1
		-3.0	-10	-	-	-	-	-	-	-	-	*7.0	*15,470	4.6	10,180	6.5	21.1
		-4.5	-15	-	-	-	-	-	-	-	-	*7.2	*15,750	6.8	15,530	5.0	16.0
Boom:	5.7 m (18' 8")	7.5	25	-	-	-	-	-	-	-	-	*4.9	*10,930	*4.9	*10,930	6.2	19.9
Arm:	2.9 m (9' 6")	6.0	20	-	-	-	-	-	-	-	-	*4.6	*10,120	4.2	9,480	7.3	23.8
Shoe:	800 mm (32")	4.5	15	*5.4	*11,760	4.0	8,670	-	-	-	-	*4.5	*9,950	3.6	8,020	8.0	26.2
CWT:	4,200 kg	3.0	10	*5.8	*12,560	3.9	8,450	-	-	-	-	*4.6	*10,220	3.3	7,300	8.4	27.5
	(9,260 lb)	1.5	5	5.9	12,670	3.8	8,200	-	-	-	-	4.9	10,840	3.2	7,030	8.5	27.8
		0.0	0	5.8	12,460	3.7	8,000	-	-	-	-	5.0	11,090	3.2	7,150	8.3	27.1
		-1.5	-5	5.8	12,400	3.7	7,950	-	-	-	-	5.5	12,060	3.5	7,750	7.8	25.5
		-3.0	-10	-	-	-	-	-	-	-	-	6.5	14,380	4.1	9,180	6.9	22.7
		-4.5	-15	-	-	-	-	-	-	-	-	*6.9	*15,270	5.7	12,930	5.6	18.0
Boom:	5.7 m (18' 8")	7.5	25	-	-	-	-	-	-	-	-	*4.9	*10,920	4.5	10,160	7.1	23.0
Arm:	3.5 m (11' 6")	6.0	20	*4.7	*10,360	4.2	8,940	-	-	-	-	*4.9	*10,800	3.6	8,060	8.1	26.5
Shoe:	800 mm (32")	4.5	15	*4.8	*10,550	4.1	8,820	-	-	-	-	4.8	10,670	3.2	7,000	8.8	28.6
CWT:	4,200 kg	3.0	10	*5.2	*11,410	4.0	8,560	4.6	-	3.0	-	4.5	9,900	2.9	6,450	9.1	29.8
	(9,260 lb)	1.5	5	*5.7	*12,500	3.8	8,250	4.5	9,680	2.9	6,270	4.4	9,640	2.8	6,250	9.2	30.1
		0.0	0	5.8	12,460	3.7	8,000	-	-	-	-	4.5	9,820	2.9	6,340	9.0	29.5
		-1.5	-5	5.7	12,310	3.6	7,860	-	-	-	-	4.8	10,520	3.1	6,770	8.6	28.0
		-3.0	-10	5.7	12,390	3.7	7,930	-	-	-	-	5.5	12,100	3.5	7,760	7.8	25.5
		-4.5	-15	-	-	-	-	-	-	-	-	*5.9	*12.990	4.5	10.010	6.6	21.5

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.

#### LIFTING CAPACITY EC220ELR

Lifting capacity at the arm end without bucket.

For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	relate	hook ed to		6.0m	(20')			7.5m	(25')			9.0m	(30')			10.5m	(35')			
	1 0	ground level		1 0		ig UC	Acros	ss UC	Alor	ig UC	Acros	ss UC	Alon	g UC	Acros	ss UC	Alon	g UC	Acro	ss UC
	m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb		
Boom: 8.85 m (29'	0") 12.0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Arm: 6.25 m (20'	6") 10.5	35	-	-	-	-	-	-	-	-	-	-	-	-	-	*3,530	-	*3,530		
Shoe: 800 mm (32	9.0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	*4,750	-	*4,750		
CWT: 5 000 kg	7.5	25	-	-	-	-	-	-	-	-	-	-	-	-	*2.2	*4,910	*2.2	*4,910		
(11 030 lb)	6.0	20	-	-	-	-	-	-	-	-	-	-	-	-	*2.4	*5,240	*2.4	*5,240		
	4.5	15	-	-	-	-	-	-	-	-	*2.8	*6,140	*2.8	*6,140	*2.6	*5,700	2.5	5,450		
	3.0	10	*4.6	*9,900	*4.6	*9,900	*3.7	*8,060	*3.7	*8,060	*3.2	*6,960	3.1	6,620	*2.9	*6,250	2.4	5,140		
	1.5	5	*5.6	*12,040	5.0	10,860	*4.3	*9,370	3.7	8,000	*3.6	*7,820	2.9	6,140	*3.1	*6,830	2.2	4,830		
	0	0	*6.4	*13,750	4.6	9,870	*4.9	*10,520	3.4	7,360	*4.0	*8,600	2.7	5,710	*3.4	*7,370	2.1	4,540		
	-1.5	-5	*6.9	*14,860	4.3	9,270	*5.3	*11,380	3.2	6,910	4.1	8,920	2.5	5,390	3.3	7,170	2.0	4,310		
	-3.0	-10	*7.1	*15,400	4.2	8,970	5.2	11,220	3.1	6,630	4.0	8,690	2.4	5,170	3.3	7,010	1.9	4,160		
	-4.5	-15	*7.1	15,410	4.1	8,890	5.2	11,100	3.0	6,520	4.0	8,580	2.4	5,070	3.2	6,930	1.9	4,090		
	-6.0	-20	*6.9	*14,980	4.2	8,980	5.2	11,130	3.0	6,550	4.0	8,600	2.4	5,080	3.2	6,960	1.9	4,110		
	-7.5	-25	*6.5	*13,970	4.3	9,230	*5.2	*11130	3.1	6,710	4.0	8,750	2.4	5,220	3.3	7,130	2.0	4,270		
	-9.0	-30	*5.7	*12,200	4.5	9,650	*4.6	*9,710	3.2	7,040	*3.6	*7,640	2.5	5,540	-	-	-	-		
	-10.5	-35	*4.4	*9,090	*4.4	*9,090	*3.4	-	*3.4	-	-	-	-	-	-	-	-	-		
	relate	Lifting hook related to ground			(40')			13.5m	(45')				Max.	reach						
	lev	/el	Alon	ig UC	Acros	ss UC	Alor	ig UC	Acros	ss UC	Alon	g UC	Acros	ss UC						
	m lev	/el in	Alon t	ig UC	Acros	ss UC	Alor t	ig UC	Acros	ss UC	Alon t	g UC lb	Acros t	ss UC	m	ft				
				Ť		1		<del>V</del>				ř I			m 10.3	ft 33.1				
	m	in	t	lb	t	lb	t	lb	t	lb	t	lb	t	lb						
	m 12.0	in 40	t -	lb -	t -	lb -	t -	lb -	t -	lb -	t *0.8	lb *1,950	t *0.9	lb *1,950	10.3	33.1				
	m 12.0 10.5	in 40 35	t - -	lb  -  -	t - -	lb  -  -	t - -	lb  -  -	t - -	lb - -	*0.8 *0.8	lb *1,950 *1,780	*0.9 *0.8	lb *1,950 *1,780	10.3 11.6	33.1 37.7				
	m 12.0 10.5 9.0	in 40 35 30	t - - *1.5	1b - - *2,610	t - - *1.5	1b - - *2,610	t - -	lb	t - -	lb  -  -  -	*0.8 *0.8 *0.8	1b *1,950 *1,780 *1,680	*0.9 *0.8 *0.8	1b *1,950 *1,780 *1,680	10.3 11.6 12.6	33.1 37.7 41.1				
	m 12.0 10.5 9.0 7.5	in 40 35 30 25	t - - *1.5 *2.1	1b - - *2,610 *4,190	t - - *1.5 *2.1	*2,610	t	lb	t	- - -	t *0.8 *0.8 *0.8 *0.7	lb *1,950 *1,780 *1,680 *1,630	t *0.9 *0.8 *0.8 *0.7	lb *1,950 *1,780 *1,680 *1,630	10.3 11.6 12.6 13.4	33.1 37.7 41.1 43.7				
	m 12.0 10.5 9.0 7.5 6.0	in 40 35 30 25 20	t - - *1.5 *2.1 *2.3	*2,610 *4,190 *5,120	t - - *1.5 *2.1 2.1	*2,610 *4,190 4,420	t *1.3	lb *2,230	t - - - *1.3	lb - - - - *2230	t *0.8 *0.8 *0.8 *0.7 *0.7	1b *1,950 *1,780 *1,680 *1,630 *1,620	t *0.9 *0.8 *0.8 *0.7 *0.7	1b *1,950 *1,780 *1,680 *1,630 *1,620	10.3 11.6 12.6 13.4 13.9	33.1 37.7 41.1 43.7 45.6				
	m 12.0 10.5 9.0 7.5 6.0 4.5	in 40 35 30 25 20 15	t *1.5 *2.1 *2.3 *2.5	*2,610 *4,190 *5,120 *5,410	t - - *1.5 *2.1 2.1 2.0	*2,610 *4,190 4,420 4,260	t *1.3 *1.8	lb	t - - - *1.3 1.6	lb - - - - *2230 3,330	t *0.8 *0.8 *0.8 *0.7 *0.7 *0.8	1b *1,950 *1,780 *1,680 *1,630 *1,620 *1,650	t *0.9 *0.8 *0.8 *0.7 *0.7	1b *1,950 *1,780 *1,680 *1,630 *1,620 *1,650	10.3 11.6 12.6 13.4 13.9 14.3	33.1 37.7 41.1 43.7 45.6 46.9				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0	in 40 35 30 25 20 15 10	t *1.5 *2.1 *2.3 *2.5 *2.6	*2,610 *4,190 *5,120 *5,410 *5,770	t - - *1.5 *2.1 2.1 2.0 1.9	*2,610 *4,190 4,420 4,260 4,060	t *1.3 *1.8 *2.2	*2,230 *3,440 *4,230	t - - - *1.3 1.6 1.5	lb - - - *2230 3,330 3,220	t *0.8 *0.8 *0.8 *0.7 *0.7 *0.8 *0.8	lb *1,950 *1,780 *1,680 *1,630 *1,650 *1,710	t *0.9 *0.8 *0.8 *0.7 *0.7 *0.8 *0.8	lb *1,950 *1,780 *1,680 *1,630 *1,650 *1,710	10.3 11.6 12.6 13.4 13.9 14.3	33.1 37.7 41.1 43.7 45.6 46.9 47.6				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5	in 40 35 30 25 20 15 10 5	t *1.5 *2.1 *2.3 *2.5 *2.6 *2.8	*2,610 *4,190 *5,120 *5,410 *5,770 *6,160	t - *1.5 *2.1 2.1 2.0 1.9	*2,610 *4,190 4,420 4,260 4,060 3,850	t *1.3 *1.8 *2.2 2.4	*3,440 *4,230 *4,720	t 1.3 1.6 1.5 1.4	1b - - - - *2230 3,330 3,220 3,090	t *0.8 *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8	lb *1,950 *1,780 *1,680 *1,630 *1,650 *1,710 *1,810	t *0.9 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8	Ib *1,950 *1,780 *1,680 *1,630 *1,620 *1,650 *1,710 *1,810	10.3 11.6 12.6 13.4 13.9 14.3 14.5	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5	in 40 35 30 25 20 15 10 5 0	t *1.5 *2.1 *2.3 *2.5 *2.6 *2.8 2.82	*2,610 *4,190 *5,120 *5,410 *5,770 *6,160 6,070	t - *1.5 *2.1 2.0 1.9 1.8	*2,610 *4,190 4,420 4,260 4,060 3,850 3,660	t *1.3 *1.8 *2.2 2.4 2.3	*2,230 *3,440 *4,230 *4,720 *4,830	t *1.3 1.6 1.5 1.4 1.4	*2230 3,330 3,220 3,090 2,980	t *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9	lb *1,950 *1,780 *1,680 *1,630 *1,620 *1,650 *1,710 *1,810 *1,950	t *0.9 *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9	Ib  *1,950 *1,780 *1,680 *1,630 *1,620 *1,650 *1,710 *1,810 *1,950	10.3 11.6 12.6 13.4 13.9 14.3 14.5 14.6	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5 0	in 40 35 30 25 20 15 10 5 0 -5	t	*2,610 *4,190 *5,120 *5,410 *5,770 *6,160 6,070 5,910	t *1.5 *2.1 2.0 1.9 1.8 1.7	*2,610 *4,190 4,420 4,260 4,060 3,850 3,660 3,510	t *1.3 *1.8 *2.2 2.4 2.3 2.3	*2,230 *3,440 *4,230 *4,720 *4,830 *4,250	t *1.3 1.6 1.5 1.4 1.4 1.4	1b *2230 3,330 3,220 3,090 2,980 2,890	t *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9 *1.0	lb *1,950 *1,780 *1,680 *1,630 *1,650 *1,710 *1,810 *1,950 *2,150	t *0.9 *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.8 *1.0	lb *1,950 *1,780 *1,680 *1,630 *1,650 *1,710 *1,810 *1,950 *2,150	10.3 11.6 12.6 13.4 13.9 14.3 14.5 14.6 14.4	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8 47.4				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5 0	in 40 35 30 25 20 15 10 5 0 -5 -10	t	"2,610" "4,190" "5,120" "5,410" "5,770" "6,160" 6,070 5,910 5,800	t	*2,610 *4,190 4,420 4,260 4,060 3,850 3,660 3,510 3,410	t	2,230 *3,440 *4,230 *4,720 *4,830 *4,250 *2,460	t *1.3 1.6 1.5 1.4 1.4 1.3	"2230 3,330 3,220 3,090 2,980 2,890 *2460	t *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9 *1.0 *1.1	1,500 1,780 1,780 1,680 1,630 1,620 1,650 1,710 1,810 1,950 1,2430	t *0.9 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9 *1.0 *1.1	1,780 1,780 1,680 1,630 1,650 1,650 1,710 1,810 1,950 2,150 1,430	10.3 11.6 12.6 13.4 13.9 14.3 14.5 14.6 14.4 14.2	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8 47.4 46.5 45.0				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5 0 -1.5 -3.0 -4.5	in 40 35 30 25 20 15 10 5 0 -5 -10 -15	t	*2,610 *4,190 *5,120 *5,410 *5,770 *6,160 6,070 5,910 5,800 5,780	t	"2,610" "4,190" 4,420" 4,260" 4,060" 3,850" 3,660" 3,510" 3,410" 3,380	t	*2,230 *3,440 *4,230 *4,720 *4,830 *4,250 *2,460	t *1.3 1.6 1.5 1.4 1.4 1.3	1b	t *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9 *1.0 *1.1 *1.3	"1,950" "1,780" "1,680" "1,630" "1,650" "1,710" "1,810" "1,950" "2,150" "2,430" "2,850"	t *0.9 *0.8 *0.8 *0.7 *0.8 *0.8 *0.8 *0.8 *1.0 *1.1 *1.3	1,950 1,780 1,680 1,630 1,650 1,710 1,810 1,950 2,150 2,430 2,850	10.3 11.6 12.6 13.4 13.9 14.3 14.5 14.6 14.4 14.2 13.7	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8 47.4 46.5 45.0 42.9				
	m 12.0 10.5 9.0 7.5 6.0 4.5 3.0 1.5 0 -1.5 -3.0 -4.5	in 40 35 30 25 20 15 10 5 0 -5 -10 -15 -20	t	*2,610 *4,190 *5,120 *5,410 *5,770 *6,160 6,070 5,910 5,800 5,780 *3,580	t 1.5 *2.1 2.0 1.9 1.8 1.7 1.6 1.6 1.6 1.6	*2,610 *4,190 4,420 4,260 4,060 3,850 3,660 3,510 3,410 3,380 3,460	t 1.3 *1.8 *2.2 2.4 2.3 2.3 *1.7	*2,230 *3,440 *4,230 *4,720 *4,830 *4,250 *2,460	t 1.3 1.6 1.5 1.4 1.4 1.3	1b	t *0.8 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.9 *1.0 *1.1 *1.3 *1.6	"1,950" "1,780" "1,680" "1,630" "1,650" "1,710" "1,810" "1,950" "2,150" "2,430" "2,850" "3,490"	t *0.9 *0.8 *0.7 *0.7 *0.8 *0.8 *0.8 *0.10 *1.1 *1.3 1.6	1,950 1,780 1,680 1,630 1,650 1,710 1,810 1,950 2,150 2,430 2,850 3,460	10.3 11.6 12.6 13.4 13.9 14.3 14.5 14.6 14.4 14.2 13.7 13.1 12.3	33.1 37.7 41.1 43.7 45.6 46.9 47.6 47.8 47.4 46.5 45.0 42.9 40.0				

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.

### Equipment.

#### STANDARD EQUIPMENT

#### **Engine**

Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler that meets Tier 4f EU (Stage IV) requirements

Air filter with indicator

Air intake heater

Cyclone pre-cleaner

Electric engine shut-off

Fuel filter and water separator

Alternator, 80 A

High capacity cooling system (50° C, 122° F)

#### Electric/Electronic control system

Advanced mode control system

Self-diagnostic system

Satellite Caretrack and 6 yr-Caretrack subscription

Machine status indication

Engine speed sensing power control

Automatic idling system

One-touch power boost

Safety stop/start function

Adjustable LCD color monitor

Master electrical disconnect switch

Engine restart prevention circuit

High-capacity halogen or LED lights:

Frame-mounted 2

Boom-mounted 1

Travel alarm

Batteries, 2 x 12 V / 140 Ah

Start motor, 24 V / 5.5 kW

#### Hydraulic system

Boom float function without HRV

Automatic sensing hydraulic system

Summation system

Arm priority

Swing priority

Pilot control pattern change

ECO mode fuel saving technology

Boom, arm and bucket regeneration valves

Swing anti-rebound valves

Boom and arm holding valves

Multi-stage filtering system

Boom cylinders (x2)

Cylinder cushioning

Cylinder contamination seals

Auxiliary hydraulic valve

Automatic two-speed travel motors

Hydraulic oil, longlife oil 46

#### Frame

Access way with handrail

Tool storage area

Punched metal anti-slip plates

Undercover (heavy-duty)

Full height counterweight:

4 200 kg (9,260 lb) - Long Crawler (L)

5 000 kg (11,030 lb) - Long Reach (LR)

#### Cab and interior

ROPS (ISO12117-2) certified cab

Silicon oil and rubber mounts with spring

Opening top hatch

Control lock out lever

Travel pedals and hand levers

Adjustable operator seat with heater and joystick control console

Control joysticks with 4 switches each

Straight travel pedal

Heater & air-conditioner, automatic

Flexible antenna

Radio with MP3 and USB Jack with bluetooth

Cab, all-weather sound suppressed, includes:

Cup holders

Door locks

Tinted glass

Floor mat

Large storage area

Pull-up type front window

Removable lower windshield

Safety glass

Sun screens, front, roof, rear

Windshield wiper with intermittent feature

Rear view camera

Master key

#### Undercarriage

Undercover

Hydraulic track adjusters

Greased and sealed track link

Track Guard

800 mm (32") shoe with triple grousers

#### **Digging equipment**

Boom: monoblock 5.7 m (18' 8"), Long Reach 8.85 m (29' 0")

Arm: 2.9 m (9' 6"), Long Reach 6.25 m (20' 6")

Manual centralized lubrication

Linkage without lifting eye

#### **OPTIONAL EQUIPMENT**

#### **Engine**

Block heater: 120 V

Oil bath pre-cleaner

Diesel coolant heater, 5 kW

Water separator with heater

Auto engine shutdown

Fuel filler pump: 50 l/min (13.2 gpm), with automatic shut-off

Standard cooling system (40° C, 104° F)

Extra work lights (Halogen or LED):

Boom-mounted 1

Cab-mounted 3

Counterweight-mounted 1

Anti-theft system

Rotating warning beacon

#### **OPTIONAL EQUIPMENT**

#### Hydraulic system

Boom hose rupture valve (HRV) with overload warning device

Arm hose rupture valve (HRV)

Boom float function with HRV

Hydraulic piping:

Work tool management system (up to 20 programmable memories)

Hammer & shear, 1 and 2 pump flow

Slope & rotator (60 lpm/16 gpm)

Extra for slope & rotator

Grapple

Oil leak (drain) line

Quick coupler piping

Breaker & shear pressure pre-setting

Additional return filter

Volvo hydraulic quick coupler S1, S1 without hook

Hydraulic oil, biodegradable 46

Hydraulic oil, longlife oil 32, 68

#### Cab and interior

Fabric seat without heater

Fabric seat with heater and air suspension

Control joysticks with semi-long

Control joysticks with 3 switch & 1 propotional

Falling object guard (FOG)

Frame-mounted

Cab-mounted

#### Cab and interior

Cab-mounted falling object protective structure (FOPS)

Side view camera

Rain shield

Smoker kit (ashtray and lighter)

Safety net for front window

Lower wiper with intermittent control

Cleaning air gun

Anti-vandalism kit

#### Undercarriage

Full track guard

500 mm (20") / 600 mm (24") / 600 mm HD (24") / 700 mm (28") / 900 mm (36") shoe with triple grousers

700 mm (28") shoe with double grousers

600 mm (24") shoe with single grouser

Digging equipment

Boom: 5.7 m (18' 8") monoblock, heavy duty

Boom: 5.57 m (18' 3") 2-piece boom

Arm: 2.0 m (6' 7"), 2.5 m (8' 2"), 2.9 m (9' 6"), 3.5 m (11' 6")

Linkage with lifting eye

#### Service

Tool kit, daily maintenance

Tool kit, full scale

#### Selection of Volvo optional equipment

#### Auto engine shutdown



#### Two-piece boom



#### Fuel fill pump



#### Diesel coolant heater



#### Cleaning air gun







Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.



**Volvo Construction Equipment** 

www.volvoce.com